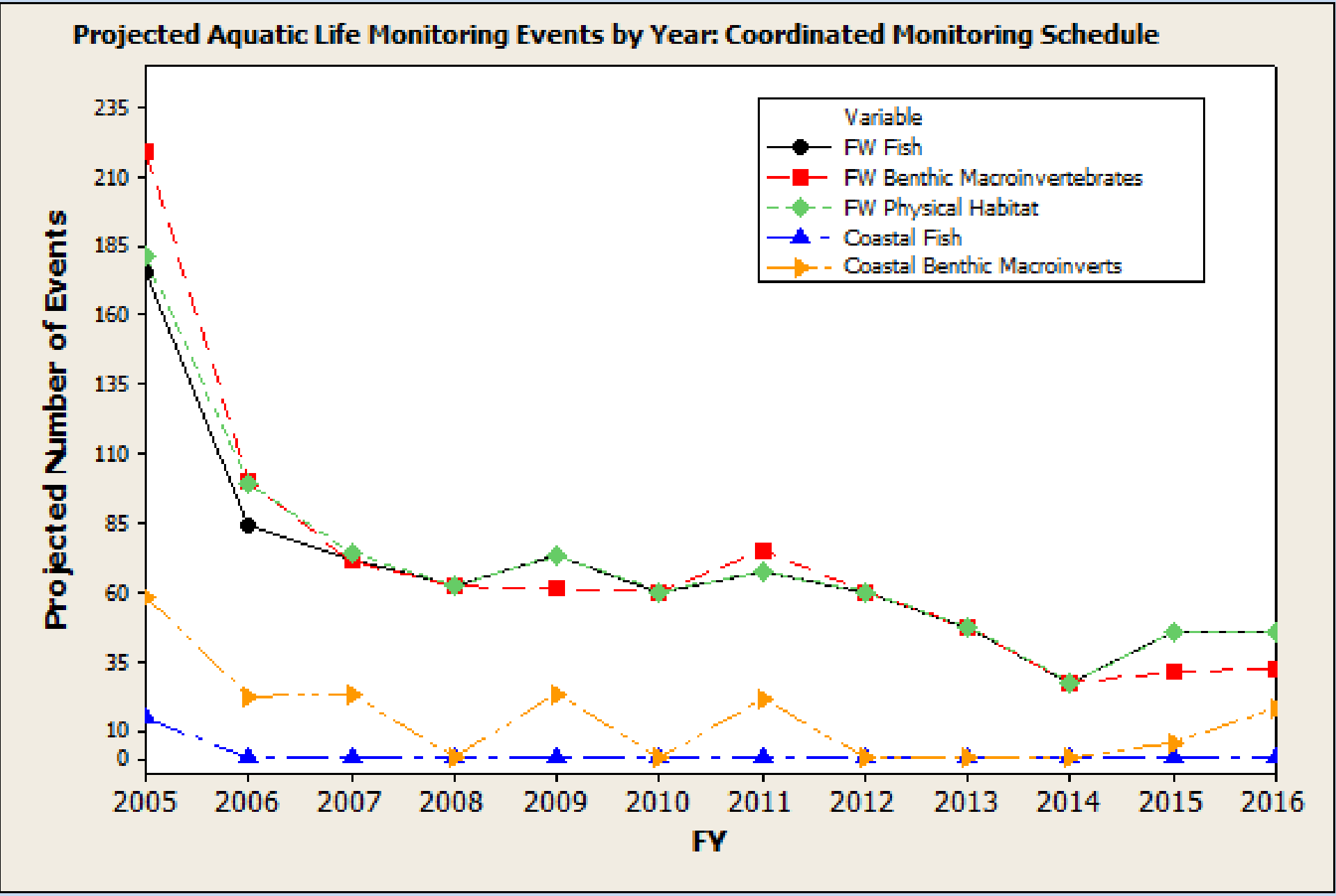
Biological Monitoring Updates

Bill Harrison
TCEQ Surface Water Quality Monitoring Team


Projected Aquatic Life Monitoring Events by Year: Coordinated Monitoring Schedule
Projected Number of Events
235
210
185
160
135
110
85
60
35
10
0
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
2015
2016
FY
Variable
FW Fish
FW Benthic Macroinvertebrates
FW Physical Habitat
Coastal Fish
Coastal Benthic Macroinverts

TCEQ and TPWD Interagency Bioassessment Workgroup

Established around 2000 at the request of the Executive Directors of both agencies with the directive to:

- **Develop and refine tools for the interpretation of biological data;**
  - **Regionalized indices of biological integrity (IBI);**
  - **Evaluating the health of seagrasses;**
  - **Evaluating physical habitat of aquatic systems and relating to biotic integrity;**

Develop methods to use these tools to:

- **Establish the appropriate aquatic life use for Receiving Water Asessments RWA's, Use Attainability Assessments (UAA's);**
- **Determine attainment of existing Aquatic Life Use in the Integrated Report (IR);**

TCEQ and TPWD Interagency Bioassessment Workgroup

Mission Statement

- **The mission of the TCEQ/TPWD interagency workgroup is to cooperatively participate in the development and refinement of methods for the collection and analysis of data to characterize the biotic integrity and physical habitat of aquatic systems in Texas.**

Workgroup Members:

- **TPWD Water Quality Program;**
- **TPWD River Studies Program;**
- **TCEQ Surface Water Quality Monitoring Team;**
- **TCEQ TMDL Team;**
- **TCEQ Water Quality Standards Development Team;**
- **TCEQ Water Quality Standards Implementation Team;**
- **TCEQ Central Office Clean Rivers Program Team;**
- **TCEQ Field Operations Regional Biologists.**

TCEQ and TPWD Interagency Bioassessment Workgroup

Quarterly meetings to discuss methods for collection and analysis of biological data:

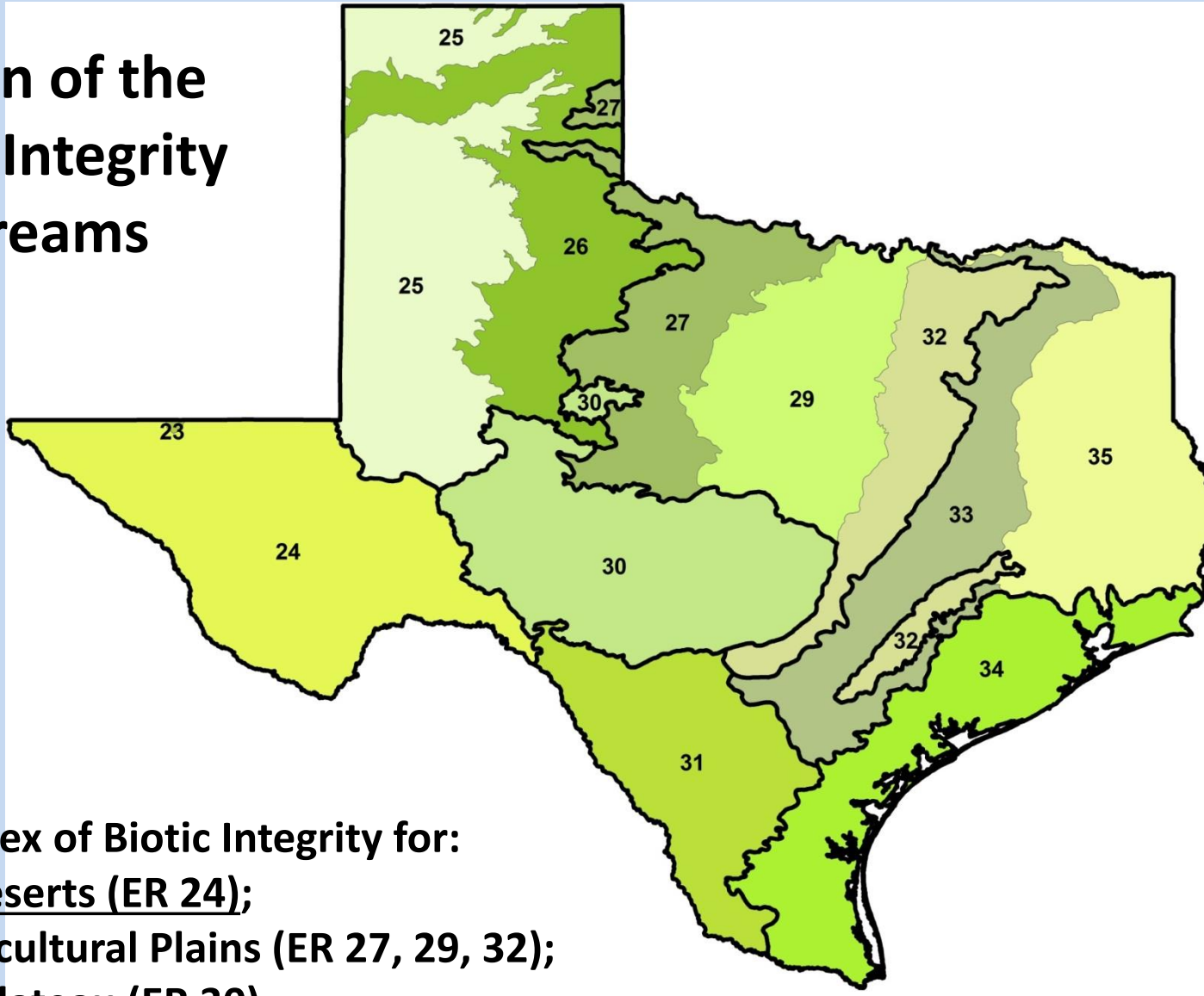
- **Use of GIS tools for analysis of the spatial distribution of existing biological samples;**
- **Texas Instream Flow Program methods (benthic macroinvertebrates);**
- **Freshwater mussel monitoring field and data interpretation methods;**
- **Regionalization of the benthic macroinvertebrate IBI for freshwater streams including tidal streams IBI;**
- **Development & review of SWQM Procedures Vol. 2;**
- **EPA Third Party Review of the TCEQ biological monitoring program.**

TCEQ and TPWD Interagency Bioassessment Workgroup

Cooperative Field Studies:

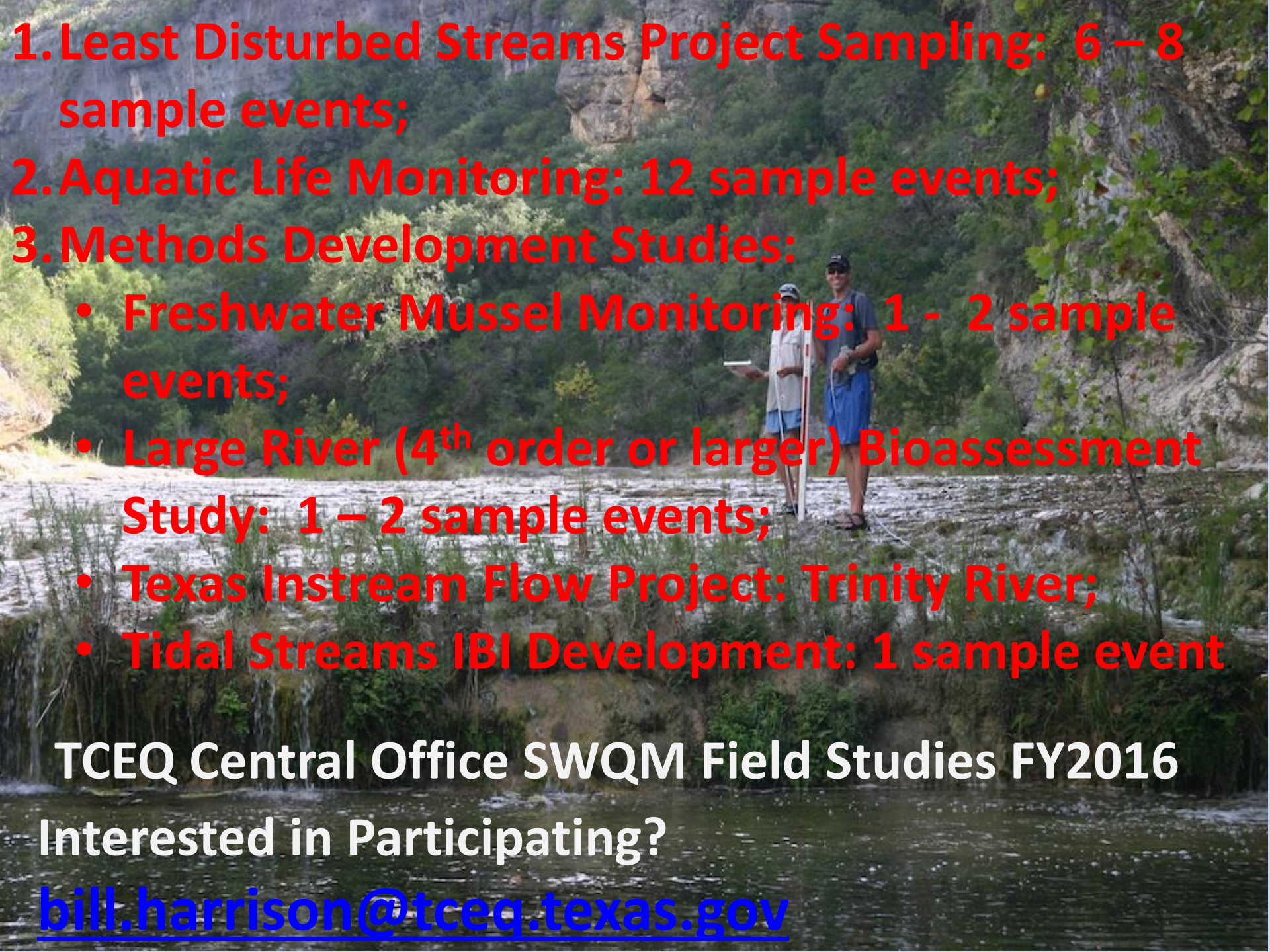
- Least Disturbed Streams/Texas Aquatic Ecoregion Project;
- National Aquatic Resource Surveys;
  - National Rivers and Streams Assessment;
  - National Coastal Condition Assessment;
- Use Attainability Analyses;
- Seagrass Monitoring;
- Routine Aquatic Life Monitoring.

Regionalization of the Index of Biotic Integrity for Texas Streams



Draft Regionalized Index of Biotic Integrity for:

- **Chihuahuan Deserts (ER 24);**
- **Subhumid Agricultural Plains (ER 27, 29, 32);**
- **Central Texas Plateau (ER 30);**
- **South Central and Southern Humid, Mixed Land Use Region (ER 33, 35);**
- **Western Gulf Coastal Plain (ER 34).**



1. Least Disturbed Streams Project Sampling: 6 – 8 sample events;
2. Aquatic Life Monitoring: 12 sample events;
3. Methods Development Studies:
   - Freshwater Mussel Monitoring: 1 - 2 sample events;
   - Large River (4th order or larger) Bioassessment Study: 1 – 2 sample events;
   - Texas Instream Flow Project: Trinity River;
   - Tidal Streams IBI Development: 1 sample event

TCEQ Central Office SWQM Field Studies FY2016

Interested in Participating?

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SWQM Procedures Vol.2 Updates

- Updates to biological data collection forms:
  - Stream Physical Characteristics Worksheet
  - Fish Regional Criteria Worksheets
- Mussel monitoring protocols in next revision of Volume 2

Biological Monitoring Training

Main focus: Field methods and data analysis techniques for benthic macroinvertebrates, fish and physical habit.

TCEQ Central Office Austin: April 5 - 7, 2015

- **Primarily for TCEQ C.O. staff and/or those who cannot make Bandera in May.**

Mayan Ranch, Bandera: May 10 – 12, 2015

Schedule: ½ day + 1 full day + ½ day

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Questions?